AGREEMENT

THIS AGREEMENT dated this 11th day of February, 2003, by and between LEON COUNTY, a political subdivision of the State of Florida, hereinafter referred to as the "County" and MCGLYNN LABORATORIES, INC., hereinafter referred to as the "Contractor."

WHEREAS, the County has determined that it would be in the best interest of the citizens of Leon County, Florida, that the County be able to utilize the services of private persons when such services cannot be reasonably provided by the County; and

WHEREAS, the County has determined that it would be better to contract for these services than to hire the necessary personnel to satisfy the needs of the County: and

WHEREAS, in order to secure the lowest cost for these services, the County has sought and received competitive proposals from contractor for such services.

NOW, THEREFORE, the parties hereto agree as follows:

1. SERVICES TO BE PROVIDED

The Contractor hereby agrees to conduct for the County the Woodville Recharge Basin Aquifer Protection Study in accordance with the Phase I and Phase II Scope of Services contained in Exhibit A. Based upon the findings of Phase I, the Scope of Services for Phase II may be modified and agreed upon in writing by both parties. The work shall be performed in accordance with the time lines contained in Exhibit B.

2. WORK

Any work to be performed shall be upon the written request of the County Administrator or his representative, which request shall set forth the commencing date of such work and the time within which such work shall be completed.

The performance of Leon County of any of its obligations under the purchase order or agreement shall be subject to and contingent upon the availability of funds lawfully expendable for the purposes of the purchase order or agreement for the current and any future periods provided for within the bid specifications.

3. TIME

The work to be performed under this contract shall be commenced within fifteen (15) days of the Notice to Proceed. All work to be performed under this Contract shall be completed by November 1, 2004. If the work to be performed under this Contract is not completed within the time set forth above, or within such extra time as may be granted by the County, the Contractor shall be deemed to be in default.

Permitting the Contractor to continue and finish the work or any part of it after the expiration of the contract time allowed, including extensions, if any, shall in no way act as a waiver on the part of County of the liquidated damages due under the contract.

4. CONTRACT SUM

The Contractor agrees that for the performance of the services as outlined above, it shall be remunerated by the County a total sum of $259,500.00 on completion of the work and acceptance of it as satisfactory. Contractor shall invoice monthly no later than the 15th of each month based upon the actual man hours and deliverables for the preceding month.

5. PAYMENTS

The County will make such payments within thirty (30) days of submission and approval of invoice for services.

6. STATUS

The contractor at all times relevant to this Agreement shall be an independent contractor and in no event shall the Contractor nor any employees or sub-contractors under it be considered to be employees of Leon County.

7. INSURANCE

Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors. The cost of such insurance shall be included in the Contractor's bid.

A. Minimum Limits of Insurance. Contractor shall maintain limits no less than:

1. General Liability: $1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.

2. Automobile Liability: $1,000,000 combined single limit per accident for bodily injury and property damage. (Non-owned, Hired Car).

3. Workers' Compensation and Employers Liability: Insurance covering all employees meeting Statutory Limits in compliance with the applicable state and federal laws and Employer's Liability with a limit of $500,000 per accident, $500,000 disease policy limit, $500,000 disease each employee. Waiver of Subrogation in lieu of Additional Insured will suffice.

B. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the County. At the option of the County, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the County, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

C. Other Insurance Provisions The policies are to contain, or be endorsed to contain, the following provisions:

1. General Liability and Automobile Liability Coverages (County is to be named as Additional Insured).

a. The County, its officers, officials, employees and volunteers are to be covered as insureds as respects; liability arising out of activities performed by or on behalf of the Contractor, including the insured's general supervision of the Contractor; products and completed operations of the Contractor; premises owned, occupied or used by the Contractor; or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protections afforded the County, its officers, officials, employees or volunteers.

b. The Contractor's insurance coverage shall be primary insurance as respects the County, it officers, officials, employees and volunteers. Any insurance of self-insurance maintained by the County, its officers, officials, employees or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.

c. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the county, its officers, officials, employees or volunteers.

d. The Contractor's insurance shall apply separately to each insured against whom claims is made or suit is brought, except with respect to the limits of the insurer's liability.

2. All Coverages

Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the County.

D. Acceptability of Insurers. Insurance is to be placed with insurers with a Best's rating of no less than A:VII.

E. Verification of Coverage. Contractor shall furnish the County with certificates of insurance and with original endorsements effecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements are to be received and approved by the County before work commences. The County reserves the right to require complete, certified copies of all required insurance policies at any time.

F. Subcontractors. Contractors shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

8. LICENSES

The Contractor shall be responsible for obtaining and maintaining his city or county occupational license and any licenses required pursuant to the laws of Leon County, the City of Tallahassee, or the State of Florida. Should the Contractor, by reason of revocation, failure to renew, or any other reason, fail to maintain his license to operate, the contractor shall be in default as of the date such license is lost.

9. ASSIGNMENTS

This Contract shall not be assigned or sublet as a whole or in part without the written consent of the County nor shall the contractor assign any monies due or to become due to him hereunder without the previous written consent of the County.

10. HOLD HARMLESS

The Contractor agrees to indemnify and hold harmless the County from all claims, damages, liabilities, or suits of any nature whatsoever arising out of, because of, or due to the breach of this agreement by the Contractor, its delegates, agents or employees, or due to any act or occurrence of omission or commission of the Contractor, including but not limited to costs and a reasonable attorney's fee. The County may, at its sole option, defend itself or allow the Contractor to provide the defense. The Contractor acknowledges that ten dollars ($10.00) of the amount paid to the Contractor is sufficient consideration for the Contractor's indemnification of the County.

11. MINORITY BUSINESS ENTERPRISE (M/WBE)PARTICIPATION

The Contractor shall meet or exceed the M/WBE participation levels stated in the M/WBE Participation Statement included as part of the bid response for this project, except when the County Good Faith Committee approves an exception.

Any "Good Faith Statement" provided by a Contractor shall follow the requirements of the Florida Statutes, and must demonstrate through documentation that every reasonable effort has been made to achieve the requested percentage.

For those M/WBE firms listed in their bid, Contractors shall be responsible for securing proof of their M/WBE certification and providing copies to the County M/WBE Office.

Also required is a monthly reporting system of the work done by and payments made to certified minority business enterprises as a part of this project. The reports shall detail each invoice submitted to the County and a break down of payments to all subcontractors therein by M/WBE classification.

12. AUDITS, RECORDS, AND RECORDS RETENTION

The Contractor agrees:

a. To establish and maintain books, records, and documents (including electronic storage media) in accordance with generally accepted accounting procedures and practices, which sufficiently and properly reflect all revenues and expenditures of funds provided by the County under this contract.

b. To retain all client records, financial records, supporting documents, statistical records, and any other documents (including electronic storage media) pertinent to this contract for a period of five (5) years after termination of the contract, or if an audit has been initiated and audit findings have not been resolved at the end of five (5) years, the records shall be retained until resolution of the audit findings or any litigation which may be based on the terms of this contract.

c. Upon completion or termination of the contract and at the request of the County, the Contractor will cooperate with the County to facilitate the duplication and transfer of any said records or documents during the required retention period as specified in paragraph 1 above.

d. To assure that these records shall be subject at all reasonable times to inspection, review, or audit by Federal, state, or other personnel duly authorized by the County.

e. Persons duly authorized by the County and Federal auditors, pursuant to 45 CFR, Part 92.36(I)(10), shall have full access to and the right to examine any of provider's contract and related records and documents, regardless of the form in which kept, at all reasonable times for as long as records are retained.

f. To include these aforementioned audit and record keeping requirements in all approved subcontracts and assignments.

13. MONITORING

To permit persons duly authorized by the County to inspect any records, papers, documents, facilities, goods, and services of the provider which are relevant to this contract, and interview any clients and employees of the provider to assure the County of satisfactory performance of the terms and conditions of this contract.

Following such evaluation, the County will deliver to the provider a written report of its findings and will include written recommendations with regard to the provider's performance of the terms and conditions of this contract. The provider will correct all noted deficiencies identified by the County within the specified period of time set forth in the recommendations. The provider's failure to correct noted deficiencies may, at the sole and exclusive discretion of the County, result in any one or any combination of the following: (1) the provider being deemed in breach or default of this contract; (2) the withholding of payments to the provider by the County; and (3) the termination of this contract for cause.

14. TERMINATION

Leon County may terminate this Contract without cause, by giving the Contractor thirty (30) days written notice of termination. Either party may terminate this Contract for cause by giving the other party hereto thirty (30) days written notice of termination. The County shall not be required to give Contractor such thirty (30) day written notice if, in the opinion of the County, the Contractor is unable to perform its obligations hereunder, or if in the County's opinion, the services being provided are not satisfactory. In such case, the County may immediately terminate the Contract by mailing a notice of termination to the Contractor.

15. PUBLIC ENTITY CRIMES STATEMENT

In accordance with Section 287.133, Florida Statutes, Contractor hereby certifies that to the best of his knowledge and belief neither Contractor nor his affiliates has been convicted of a public entity crime. Contractor and his affiliates shall provide the County with a completed public entity crime statement form no later than January 15 of each year this agreement is in effect. Violation of this section by the Contractor shall be grounds for cancellation of this agreement by Leon County.

16. REVISIONS

In any case where, in fulfilling the requirements of this contract or of any guarantee, embraced in or required thereby it is necessary for the Contractor to deviate from the requirements of the bid, Contractor shall obtain the prior written consent of the County.

17. CONSTRUCTION

The validity, construction, and effect of this Contract shall be governed by the laws of the State of Florida.

WHERETO, the parties have set their hands and seals effective the date whereon the last party executives this Agreement.

CONTRACTOR

WITNESS: Ann L. Lance BY: President CEO

WITNESS: Carole C. Abbott DATE 2-26-03

Ann L. Lance

Carole C. Abbott

(CORPORATE SEAL)

STATE OF Fl
COUNTY OF Leon

The foregoing instrument was acknowledged before me this 26 day of Feb, 2003.

By Kathleen Mc Glynn, of Mc Glynn Laboratories, Inc
(Name of officer or agent, title of officer or agent) (Name of corporation acknowledging)

a Fl corporation, on behalf of the corporation.
(State or place of incorporation)

He/she is personally known to me or has produced FL DL M245 506 61 709 0 as identification.
(type of identification)

Carole C. Abbott
Signature of Notary

Carole C. Abbott
Type or Stamp Name of Notary

MY COMMISSION # CC 865370
EXPIRES: August 23, 2003
Bonded Thru Notary Public Underwriters

Serial Number, If Any

LEON COUNTY, FLORIDA

BY: _____
Tony Grippa, Chairman
Board of County Commissioners

DATE: 3/3/03

ATTEST:
BOB INZER, CLERK OF THE COURT
LEON COUNTY, FLORIDA

By: _____

APPROVED AS TO FORM:
LEON COUNTY ATTORNEY'S OFFICE

By: _____
Herbert W.A. Thiele, Esq.
County Attorney

Exhibit A

SCOPE OF SERVICES

PHASE I

(Three months)

Task 1: Collect and Review Existing Data/Study Area Prioritization

Task 1.1

A comprehensive search will be conducted of all existing data and modeling studies regarding the Woodville Recharge Basin, including the ecology, hydrology, topography, soils, existing and proposed land use designations, locations of active and inactive karst features, locations of existing wells and septic tanks, extent of sewer service areas, etc. within the basin. Information regarding potential up-gradient sources of water quality degradation that exist outside of the basin will also be compiled, as well as potential sensitive environmental features down-gradient of the basin. Meetings will be held with the various stakeholders in the area such as the Woodville Karst Plain Divers, the Hydrogeology Consortium, the Leon County Science Advisory Committee, Florida A&M Department of Environmental Science, Leon County Water Resources Committee, the CoT Sprayfield staff, the CoT water quality monitoring lab, the Northwest Florida Water Management District, the Florida Department of Environmental Protection, the Florida Geological Survey, etc.

A bibliography of all data, scientific studies, reference articles etc. discovered during this search will be included in the Summary Report due at the end of Phase I . A brief narrative summary of facts, information, and opinions developed during the above meetings and interviews will also be provided.

Task 1.2

All acquired data will be analyzed for relevance and completeness to determine what additional field data and analyses are still needed to develop a thorough understanding of the hydrogeology, vulnerability and sources of pollution to the Woodville Basin's aquifer. Where the information

and data obtained is organized into a digital data base with geographic coordinates, it will be entered into a Geographic Information System (GIS) database that is fully compatible with the Leon County GIS. The GIS data entered, along with that already in the County's GIS, will be utilized for comparison, analysis, and graphic presentation.

The newly developed GIS data, GIS maps of the data, and an inventory/bibliography of such will be delivered to the County as part of the Phase I Summary Report.

Task 1.3

Utilizing the existing County GIS, along with the new information collected and entered into the GIS, the sub-basins of the Woodville Recharge Basin will be prioritized for future study, into the following classes: (1) sub-basins that do not require further study, (2) sub-basins that need only minor study, and (3) sub-basins that need intensive study.
The methodology and protocol for this prioritization shall be worked out via discussions between the consultant and County staff.

The results of this sub-basin prioritization will be displayed on a color coded GIS map provided to the County at the conclusion of Phase One. The digital data to generate the map shall also be delivered to the County at the same time.

Task 2: Hydrologic Vulnerability Assessment Methodology

Task 2.1: Identify vulnerable areas of the aquifer

For each (and all) of the sub-basins in the Woodville Karst Basin, utilizing existing soils maps and soil surveys, existing geologic maps, and by meeting with local cave divers, determine and map (on a County GIS compatible basis) the (1) direct percolation/infiltration potential of the surficial soils/overburden, (2) the location of karst windows directly into the Floridan aquifer, (3) the location of filtered/closed karst windows discharging to the aquifer, (4) the area of the sub-basin collecting and discharging conveyance flow directly to the above karst windows, and (5) the location of significant conduits within the aquifer.

Utilizing this newly created GIS data and data already in the County GIS, the Woodville sub-

basins will be assessed with respect to the underlying Floridan Aquifer's vulnerability to both point (Karst window inflow) and non-point source (in-situ infiltration through overburden to the underlying aquifer) contaminants. This set of sub-basin vulnerability ratings will be dependent only upon the hydrogeologic characteristics of the aquifer, the permeability of the overlying unconsolidated soils and rock, and the topographic concentration of stormwater to karst windows, and not upon the pollutants, both existing and potential, that may be situated/generated at the ground surface.

A color coded GIS map and the associated GIS digital data demonstrating the intrinsic hydrogeologic vulnerabilities of the aquifer to (1) direct percolation/infiltration and to (2) karst window discharges will be produced and delivered to the County at the conclusion of Phase One of the Study.

Task 2.2: Develop and produce a GIS map and digital data base of the existing and potential, point and non-point sources of pollution to the aquifer.

An existing conditions in-situ pollution loading map will be developed based on existing conditions land use maps, known (from the technical literature) pollution loading factors, and on known (or easily discovered), existing point-source pollution occurring in the Woodville basin.

A County-GIS compatible existing conditions pollution loading map will be provided to the County at the conclusion of Phase One.

Task 2.3: Prioritize the sub-basins as to their vulnerability to contamination

Based on both the intrinsic hydro-geologic vulnerability of the aquifer (Task 2.1), the existing conditions areal distribution and intensity of pollutants (Task 2.2), and the probable method of transport of these pollutants into the aquifer (direct infiltration through overburden or inflow through karst windows), prioritize the sub-basins and areas within the sub-basins as to the aquifer's vulnerability to contamination from existing pollution sources.

A GIS map and digital data showing the Relative Vulnerability of Woodville Sub-Basins to Contamination from Existing Pollution Sources will be produced and delivered to the County as

part of the Phase I draft summary report.

Task 3: Pollutant Loading Analyses Methodology

Task 3.1: Atmospheric deposition of pollutants and rainfall (tipping bucket gage with continuous recorder) in the Woodville basin will be measured for the duration of the project.
A proposal to install (at a specific location), monitor, and service bulk atmospheric pollution deposition instruments and a recording tipping bucket rainfall gage will be developed and provided in the Phase I Summary Report. In Phase II of the study, a data report quantifying atmospheric pollution deposition and 5-minute-interval rainfall will be provided to the County on a quarterly basis.

Task 3.2: Select and then monitor the discharges to karst windows having high vulnerability
Based upon an analysis of the findings and maps generated in Task 2, an appropriate number of open karst windows with a high vulnerability to pollution from existing sources will be selected for stormwater runoff water quality monitoring. A list and description of these open karst windows and the rationale for their selection will be provided in the Phase I Summary Report.

In the subsequent monitoring phase of this study, automated samplers capable of taking flow-weighted water quality samples during storm events will be placed on these open karst windows for the duration of the project.

An appropriate number of closed Karst features such as lakes and depressions which have high vulnerability to pollution from existing sources will be selected for monthly water quality sampling and simultaneous recording of water stage. These locations and the rationale for their selection will be provided in the Phase I Summary Report. Monthly monitoring will be proposed for these locations.

Task 3.3: Septic Tanks

The technical and scientific literature concerning pollutant loading by septic systems and pollutant attenuation of soils underlying septic drain fields will be reviewed. An effort will be made to ascertain/develop realistic pollutant loading factors from septic systems to the underlying aquifer/soils. Existing County data (property parcels with structural improvements, Health Department septic tank permits, etc.) will be used to develop a GIS map and data base showing the locations of the septic systems in the Woodville basin.
The septic systems mapping and pollution loading methodology that will be used in Phase II to assess and quantify the impacts of septic systems on the aquifer will be presented in the Phase I Summary Report.

Task 3.4: City of Tallahassee (CoT) Spray Field

The piezometric level of groundwater on and adjacent to the sprayfield, incoming effluent water quality, monitoring well groundwater water quality, and other relevant data on the CoT Sprayfield will be collected and assessed. Technical and scientific literature on the pollution effects of sprayfields on sandy soils will be researched for their relevance.

The important findings of the above investigation will be set forth in the Phase One Summary Report.

A field monitoring and study plan - (1) to accurately define the piezometric levels of the aquifer and the direction of groundwater flow down gradient from the CoT Sprayfield and (2) to assess the sprayfield's effects/impacts on the water quality of the down gradient aquifer will be developed and set forth in the Phase I Summary Report.

Task 3.5: Land use effects on the aquifer

Local land use data (GIS maps and tabular data) will be collected and organized so that it can be utilized to examine its effects on water quality in the Woodville aquifer. A study plan and methodology to quantify the effects of various land use schemes on aquifer water quality will be set forth in the Phase One Summary Report.

A field monitoring plan to ascertain the water quality impacts on the down gradient aquifer of waste water treatment plant residuals being applied to lands within the Woodville Recharge Basin - shall be proposed in the Phase One Summary Report.

Task 3.6: Research existing data and propose a monitoring effort to define the piezometric surface of the Woodville Karst Basin aquifer and the resulting flow directions.

Existing potentiometric elevation data on the Woodville aquifer will be collected and reviewed. Subsequent to review of this data, a specific water well sampling scheme to further define/refine the potentiometric surface of the aquifer will be proposed. The goal of this monitoring effort will be to accurately define the direction of groundwater flow within the Woodville Karst Basin, especially in the area between the CoT Sprayfield, the St. marks River, and the Leon County Line north of Waukulla Springs .

The maps and data discovered, as well as the proposed potentiometric surface mapping and monitoring program, will be presented in the Phase I Summary Report.

Task 3.7: Select the analytes/pollutants that will be studied and monitored to best understand the existing and potential pollution of the Woodville Basin Aquifer and how to best assure the protection of the aquifer.

The types of contaminants reaching the aquifer are a result both of the pollutant source and the path and mechanism by which the contaminant is transported to and through the aquifer. Water transported pollutants either percolate and diffuse through the overlying soils where they can be altered, retained, or removed or they are transported directly into the aquifer by flowing into and through a karst window. Conservative pollutants are those that are not affected as they travel through soil.

In their study of the Floridan Aquifer, the NWFWMD used the conservative pollutant, Nitrate-Nitrite, as a tracer. Other examples of tracers include Chloride, Caffeine and Coprostanol (a metabolite of cholesterol). Additional analytes that could be monitored include: Physical-Chemical: Water Temperature; Turbidity (NTU); Dissolved Oxygen (mg/L); Percent Saturation; pH; Conductivity. Laboratory Chemistry: Turbidity (NTU); True Color (PtCo Units); Alkalinity

(mg/L); Chloride (mg/L); TSS, Residues; TDS, Residues; Ortho-Phosphorus (mg/L, filtered in the field); Total Phosphorus (TP, mg/L); Total Inorganic Phosphorus (TIP, mg/L); Nitrite (mg/L); Nitrate + Nitrite (mg/L); Nitrate (mg/L); Total Inorganic Nitrogen (TIN, mg/L); TIN/TIP Ratio; Ammonia (mg/L); Total Kjeldahl Nitrogen (TKN, mg/L); Total Nitrogen (TN), mg/L); Chlorophylls (mg/L); Organic Carbons (TOC, DOC and POC mg/L); Semi-volatile Organics (ug/L); Pesticides; Herbicides (ug/L); Heavy Metals (ug/L): Fecal and Total Coliforms; Stable isotopes of Phosphorus, Nitrogen Carbon and Oxygen.

A limited suite of the above pollutants and parameters will be recommended for monitoring and study during Phase II. The Summary Report will list the parameters chosen and also include a brief explanation as to why they are of specific value to this study.

Task 4: Phase 1 Draft Summary Report

A draft summary report will be prepared to summarize and present the information, analyses, methodologies for further study, and work efforts called for in Tasks 1, 2, and 3 above. The report will propose specific study efforts and methodologies for appropriately investigating the two classes of sub-basins: those needing only minor study, and those needing intensive study. The report, along with a proposed Phase II Scope of Work will be submitted to Leon County for review and approval.

Subsequent to County approval, a public meeting will be held in the Woodville Area to present the findings of Phase I and the proposed Phase II Scope of Work to the public. The input resulting from the public meeting will be considered at a subsequent meeting with County Staff and, where appropriate, integrated into the Phase II Scope of work..

Task 5: Phase 1 Final Summary Report

After review and approval of the draft summary report by Leon County, a Final Summary Report of Phase I will be prepared, including any modifications requested by Leon County to the draft report. Five color copies of this report will be provided.

The costs associated with the various tasks of Phase I are itemized on Exhibit B.

Woodville Recharge Basin Aquifer Protection Study
BC-07-19-02-29
Projected (Preliminary) Scope of Work for Phase II -
Monitoring, Analysis and Recommendations

Prepared By
Mcglynn Laboratories Inc.

Task 6: Water Quality Sampling/Data Collection in the Woodville Recharge Basin (12 month)

- 6.1 Define the piezometric levels, the direction of groundwater flow, and the water quality in the Woodville aquifer. Emphasize the area down gradient of the City of Tallahassee sprayfield and, for this portion of the basin, provide an interim technical report on the findings by December 2003.
- 6.2 Sample surface waters in the Woodville Recharge Basin.
- 6.3 Atmospheric Deposition Sampling

Task 7: Hydrologic Vulnerability Assessment in the Woodville Recharge basin(12 month)

- 7.1 Assess and quantify the transport of pollutants from the CoT Sprayfield to the aquifer.
- 7.2 Assess and quantify the impacts to aquifer water quality due to land disposal of waste water treatment plant residuals.
- 7.3 Assess and quantify the transport of pollutants from residentail septic systems to the aquifer.
- 7.4 Assess and quantify the transport of stormwater pollutants to the aquifer due to direct groundwater percolation.
- 7.5 Assess and quantify the transport of stormwater pollutants to the aquifer via runoff/conveyance into open sinks and soil filled karst depressions.
- 7.6 Assess and quantify the transport of pollutants from agricultural activities and other local land uses to the aquifer.
- 7.7 Assess and quantify the transport of atmospheric pollutant loadings to the aquifer.
- 7.8 For each of the basins in the study area, determine the annual volume of (1) direct percolation to the aquifer and (2) the input via runoff and conveyance to the sinks within the basin. Produce a table with these results.
- 7.9 Produce a table of ratios (for the individual basins) that compares the magnitude of runoff/conveyance to direct groundwater percolation
- 7.10 Produce a second table that normalizes the values determined in Task 7.9 to a scale of 1 to 10.

Task 8: GIS Mapping/Modeling (begins after data collection)

- 8.1 Produce County GIS compatible data layers displaing the hydrologic vulnerability of the closed basins in the Woodville Recharge Basin for case (7.1 - 7.7).

Task 9: Pollutant Loading Analyses (begins after data collection)

- 9.1 Determine the in-place pollutant loadings in the Woodville Recharge Basin
  - 9.1.1 Develop a table of annual in-place non-point pollutant loadings for the individual property parcels (or groups of parcels).
  - 9.1.2 Produce a color shaded or color coded GIS parcel map that displays in-place pollution loading per acre.
- 9.2 Determine the pollutant loadings transported to the aquifer inj the Woodville recharge Basin
  - 9.2.1 Determine the total annual pollutant loadings (from mechanisms 7.1 - 7.7) transported into the aquifer beneath each closed basin.
  - 9.2.2 Produce a table summarizing these values.
  - 9.2.3 Produce a table normalizing the values in the table above to a scale from 1 to 10.
  - 9.2.4 Produce a County GIS compatible data layer to display both the total loadings per closed basin and the pollutant loadings per acre.
- 9.3 Determine aerial distribution of aquifer pollution in the Woodville Recharge Basin
  - 9.3.1 Utilizing ModFlow groundwater/aquifer flow models determine the aerial extent and concentration of aquifer pollution.

9.3.2 Determine those portions of the aquifer where FDEP drinking water standards could will be violated at build out.

9.3.3 Develop a County GIS compatible map of Woodville Recharge Basin displaying the aquifer pollution findings.

Task 10: Propose Mitigation Options and Associated Cost Estimates

10.1 Based on the findings of the steps above, propose appropriate basin specific mitigation measures that can include, but are not limited to:

* Restricting the use of septic tanks in aquifer-vulnerable areas.
* Modifications to the current TP Smith WRF management plan
* Proposing sewer systems for specific areas of the Woodville Recharge Basin
* Proposing better water quality treatment regulations for stormwater runoff.
* Proposing specific stormwater retrofit projects to provide stormwater treatment prior to discharge
* Restricting certain land uses or the density of development in aquifer vulnerable areas
* Purchasing of specific aquifer vulnerable lands by government.
* Offering tax incentives for placing conservation easements on aquifer vulnerable areas
* Encouraging via incentives, zoning, etc. the development of land parcels that are less likely to cause pollution of the aquifer
* Establish a permit based trust fund to provide the monies to accomplish land and conservation easement purchases
* Others suggestions tendered by the Consultant

10.2 Develop preliminary cost estimates for implementing the land purchase and capital improvement options set forth in 10.1

Task 11: Prepare a Draft Report of the results of Tasks 6 thorugh 10.

Task 12: Hold public meetings to disseminate and discuss the findings and recommendations of the Study.

Task 13: Prepare the Final Report for the Woodville Recharge Basin Aquifer Protection Study

Woodville recharge Basin Aquifer Protection Study

BC-07-19-02-29

Phase 1

Exhibit B: Consultants' Man-Hour/Fee Summary

Prepared By

Mcglynn Laboratories Inc.

Task	Personnel (with hourly rates)						Man-Hours	Total Cost
	Dr. S. McGlynn MLI Project Director $92	Dr. T. Kwader, P.G. URS Geologist $125	B. Norman URS GIS $68	K. McGlynn MLI Administration $50	M. Land MLI Data Entry $18	G. Marsh MLI Data Entry $18		
Task 1: Collect and review Existing Data/Study Area Prioritization								
1.1	20	10	16	1	20	20	67	$4,948.00
1.2	1	10	20	1	10	10	42	$3,112.00
1.3	1	10	6	1	15	15	33	$2,340.00
Task 2: Hydrological Vulnerability Asessment Methodology								
2.1	1	15	20	1			37	$3,377.00
2.2	1	5	10	1			17	$1,447.00
2.3	1	0	5	1			7	$482.00
Task 3: Pollutant loading Analysis Methodology								
3.1	1	5	0				6	$717.00
3.2	5	15	4				24	$2,607.00
3.3	20	5	4				29	$2,737.00
3.4	20	10	6	1			37	$3,548.00
3.5	10	5	6				21	$1,953.00
3.6	10	0	6				16	$1,328.00
3.7	10	0	0	1			11	$970.00
Task 4: Phase 1 Draft Summary Report								
4.1	15	12	8	1	10	10	56	$3,834.00
Task 5:Phase I Final Summary Report								
5.1	10	4	8	1			23	$2,014.00
	126	106	119	10	55	55	416	$35,414.00
	$11,592.00	$13,250.00	$8,092.00	$500.00	$990.00	$990.00	$35,414.00	

Woodville recharge Basin Aquifer Protection Study
BC-07-19-02-29
Projected Fee Schedule for Phase II

Prepared By
Mcglynn Laboratories Inc.

Task	Item Cost	Task Cost
Task 6: Water Quality Sampling/Data Collection/Well Installation in the Woodville Recharge Basin (12 months)		
6.1	$87,000.00	
6.2	$30,000.00	
6.3	$11,886.00	
Total Task 6		**$128,886.00**
Task 7: Hydrologic Vulnerability Assessment in the Woodville Recharge Basin (12 month)		
7.1	$10,000.00	
7.2	$1,000.00	
7.3	$5,000.00	
7.4	$5,000.00	
7.5	$5,000.00	
7.6	$1,000.00	
7.7	$1,000.00	
7.8	$2,000.00	
7.9	$500.00	
7.10	$500.00	
Total Task 7		**$31,000.00**
Task 8: GIS Mapping (Begins after data collection)		
8.1	$2,000.00	
Total Task 8		**$2,000.00**
Task 9: Pollutant Loading Analyses (Begins after data collection)		
9.1		
9.1.1	$2,000.00	
9.1.2	$700.00	
9.2		
9.2.1	$5,000.00	
9.2.2	$500.00	
9.2.3	$250.00	
9.2.4	$1,000.00	
9.3		
9.3.1	$5,000.00	
9.3.2	$3,000.00	
9.3.3	$1,000.00	
Total Task 9		**$18,450.00**

Task 10: Proposed Mitigation Options/Preliminary Cost Estimates		
10.1	$15,750.00	
10.2	$2,000.00	
Total Task 10		**$17,750.00**
Task 11: Phase 2 Draft Report		**$13,000.00**
Task 12: Public Involvement		**$4,000.00**
Task 13: Aquifer Protection Study Report		**$9,000.00**
Total Cost All Tasks Phase II		**$224,086.00**

Woodville Recharge Basin Aquifer Protection Study

BC-07-19-02-29

Summary of Contracted Work Efforts

Phase I

1. McGlynn Laboratories Inc (W/MBE Phase I Total)		$14,072.00	39.7%
2. Subconsultants			
a. URS		$21,342.00	60.3%
	Phase I Total:	**$35,414.00**	

Phase II

Anticipated Tasks 6 through 13	**Phase II Total:**	**$224,086.00**

Project Total

Tasks 1 through 13	**$259,500.00**

Woodville recharge Basin Aquifer Protection Study Time Lines
BC-07-19-02-29

Phase 1/Time Line